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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,938	06/20/2003	Atsushi Magara	9281/4578 N US02051	9448
7590 Brinks Hofer Gilson & Lione P.O. Box 10395 Chicago, IL 60610			EXAMINER GARCIA, CARLOS E	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 07/11/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/600,938

**Applicant(s)**

MAGARA, ATSUSHI

**Examiner**

CARLOS E. GARCIA

**Art Unit**

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 3/21/2008
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 3/21/2008 was filed after the mailing date of the first action on the merits on 2/08/2008. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 4-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Okumura et al. (JP 04-353613).

Re claim 1: Okumura et al. disclose a rotary double azimuth magnetic head (as shown in Fig.1(a)-1(b)) comprising: at least one pair of magnetic heads (1 and 2) having gaps (defined by 4), whose azimuth angles are different from each other (as shown in Fig.1; defined by  $+\theta$  and  $-\theta$ ) and a rotating cylinder (head base 3 is connected to a cylindrical rotary drum for rotation purposes) comprising boards (head base 3) for having the corresponding magnetic heads fixed thereto (as shown in Fig.1-5), wherein the magnetic heads are arranged so as to have the same height (defined as H) from the corresponding gaps to board surfaces of the corresponding boards and the magnetic heads are symmetric

(see Fig.1-5; abs; para.0014, 0025, 0037) with respect to the rotating axis of the rotating cylinder, wherein each of the pair of magnetic heads is formed by an I-type core and a C-type core with a winding slot (as shown in Fig.1-5), which abut against each other having the corresponding gap interposed there between, and the gap lies closer to one side with respect to the width direction of the corresponding I-type and C-type cores, and wherein, in the rotating direction of the rotating cylinder, the C-type core of one of the magnetic heads moves ahead of the I-type core of the same and the I-type core of the other magnetic head moves ahead of the C-type core of the same (see Fig.1).

Re claim 4: Okumura et al. further disclose the tape-medium recording and playback apparatus comprising a tape-loading path (rotary head structures and magnetic recording tape mediums include tape loading paths to allow the magnetic tape to travel) formed by a tape medium which is led out from a tape reel (tape reels are used to guide the tape) and is wound around the rotary head according to claim 1.

Re claim 5: Okumura et al. further disclose wherein the tape-loading path comprises the rotary head to be driven to rotate; two guide posts respectively disposed upstream and downstream of the rotary head (typically two guide posts or shafts are placed in upstream and downstream positions for guiding the tape medium), for guiding the tape medium led out from the tape reel in order to wind the tape medium around the rotary head; and a capstan disposed downstream of the rotary head, for causing the tape medium to run (capstans and rollers are used for guiding a tape medium around a tape loading path).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al.

However, Okumura et al. fails to disclose or fairly suggest that each of the magnetic heads has one and another track grooves, having the corresponding gap interposed there between and having different depths from each other, for regulating a track width of the gap.

Okumura et al. discusses varying the depths of the gaps to change the track width of the gaps such as used for normal recording and long-time recording modes (para.0005).

A person of ordinary skill in the art would have had good reason to pursue the known options of regulating the track width of the gap in order to vary recording modes. It would require no more than "ordinary skill and common sense," to varying the depths of the gaps to change the track width of the heads as desired.

6. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al. in view of Applicant admitted prior art.

However, Okumura et al. fail to disclose or fairly suggest that one magnetic head has an azimuth angle equal to or greater than +10 degrees with respect to the normal of the board surface of the corresponding board and the other magnetic head has an azimuth angle equal to or less than -10 degrees with respect to the normal of the board surface of the corresponding board.

It would have been an obvious matter of design choice to use the standardized azimuth values of  $\pm 300$  degrees since the applicant has not disclosed that using this standard azimuth value solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with lower or higher azimuth angles or newly standardized values.

#### ***Response to Arguments***

7. Applicant's arguments, see page 4-5, filed 4/14/2008, with respect to the rejection(s) of claim(s) 1-5 under 35 U.S.C. 103 (a) rejection has been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of prior art as submitted by the IDS form 1449 filed on 3/21/2008.

#### ***Conclusion***

8. The prior art made of record in PTO-892 Form and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos E. Garcia whose telephone number is 571-270-1354. The examiner can normally be reached on 8:30 am to 5:00 pm, Monday thru Thursday and 8:30 to 4:00 pm, Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Carlos E Garcia/  
Examiner, Art Unit 2627

7/14/2008

/Andrea L Wellington/  
Supervisory Patent Examiner, Art Unit 2627